

# **Ultra-fast electroabsorption modulator integrated DFB lasers**

Hiroaki Takeuchi

NTT Photonics Laboratories

3-1, Morinosato Wakamiya, Atsugi-shi, Kanagawa, 243-0198, Japan

## **Abstract**

We have developed two types of high-speed electroabsorption modulator integrated DFB lasers operating at 40 Gbit/s and higher. A small modulator length of 90  $\mu\text{m}$  with a lumped-electrode results in the 40-Gbit/s operation. A traveling-wave electrode electroabsorption modulator integrated DFB laser achieves a bandwidth much higher than 50 GHz.